

MULTIMEDIA



UNIVERSITY

STUDENT IDENTIFICATION NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018

BSM3024 – STRATEGIC KNOWLEDGE MANAGEMENT

(All sections / Group)

16 OCTOBER 2017

2:30 p.m. – 4:30 p.m.

(2 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of 5 pages with 9 Questions only.
3. Attempt **ALL** questions in Section A and B. The distribution of the marks for each question is given.
4. Please write all your answers in the Answer Booklet provided.

SECTION A

HOW TO INTEGRATE DATA AND ANALYTICS INTO EVERY PART OF YOUR ORGANIZATION

Many conversations about data and analytics (D&A) start by focusing on technology. Having the right tools is critically important, but too often executives overlook or underestimate the significance of the people and organizational components required to build a successful D&A function.

When that happens, D&A initiatives can falter — not delivering the insights needed to drive the organization forward or inspiring confidence in the actions required to do so. The stakes are high, with International Data Corporation estimating that global business investments in D&A will surpass \$200 billion a year by 2020.

A robust, successful D&A function encompasses more than a stack of technologies, or a few people isolated on one floor of the building. D&A should be the pulse of the organization, incorporated into all key decisions across sales, marketing, supply chain, customer experience, and other core functions.

What's the best way to build effective D&A capabilities? Start by developing a strategy across the entire enterprise that includes a clear understanding of what you hope to accomplish and how success will be measured.

One of the major American sports leagues is a good example of an organization that is making the most of its D&A function, applying it in scheduling to reduce expenses, for example, reducing the need for teams to fly from city to city for games on back-to-back nights. For the 2016–2017 season, thousands of constraints needed to be taken into account related to travel, player fatigue, ticket revenue, arena availability, and three major television networks. With 30 teams and 1,230 games in a regular season stretching from October into April, trillions of scheduling options were possible.

The league used D&A to arrive at a schedule that:

- reduced the number of games teams played on consecutive nights by 8.4%
- reduced instances of teams playing four games in five days by 26%
- reduced instances of teams playing five games in seven days by 19%
- increased the number of consecutive games teams played without traveling by 23%
- allowed each team to appear on one of the league's premier TV networks at least once, a success that had not been achieved in the league in any prior year

Technology aside, keys to success included a clear strategy for building the new scheduling system and a commitment across the organization to seeing it through with an unwavering eye on improving the experiences for everyone involved — including players, fans, referees, and TV networks.

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Leadership teams must recognize that being successful will take courage, because once they embark on the journey, the insights from data analytics will often point to the need for decisions that could require a course correction. Leaders need to be honest with themselves about their willingness to incorporate the insights into their decision making, and hold themselves and their teams accountable for doing so.

Cultural resistance can also become a bigger obstacle than anticipated. But it's underscored by the findings of two recent studies showing that just 51% of C-suite executives fully support their organization's D&A strategy. Gartner estimates D&A projects falter 60% of the time. Why? We've observed that it's often because they are not supported by the right organizational structure and talent and are not aligned with the business strategy.

Some organizations have D&A capabilities spread across functions, or rely on a few data scientists to provide insights. Some are too reliant on technology tool kits and rigid architectures, and not enough on creating the right environment to effectively leverage people with the right expertise to drive D&A projects forward. These sorts of models usually are not capable of achieving truly transformative D&A.

Consider the case of a large global life sciences company that spent a significant sum of money building an advanced analytics platform without first determining what it was supposed to do. Executives allowed their technology team to acquire a lot of products, but no one understood what the advanced tools were supposed to accomplish or how to use them. Fortunately, executives recognized the problem before it was too late, conducting an enterprise-wide needs assessment and rebuilding the platform in a way that inspired confidence in its ability to drive efficiency and support business transformation.

Adapted from: Carl Carande, Paul Lipinski, and Traci Gusher. (2016). *How to Integrate Data and Analytics into Every Part of Your Organization*. Retrieved from: <https://hbr.org/2017/06/how-to-integrate-data-and-analytics-into-every-part-of-your-organization>

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Based on the above case, answer the following questions:

1. Explain **SIX (6)** key challenges of data and analytics (D&A) in an organization.
(12 marks)
2. Construct corporate level knowledge management solution to each of the **SIX (6)** problems identified in Question 1.
(12 marks)
3. Assuming you are a data analyst of a multinational company, explain **FOUR (4)** business risks that you may face when you wish to collect and analyze data from multiple contractual partners from different cultural background.
(12 marks)
4. Construct **SIX (6)** business level strategies to achieve economies of scales for a D&A initiative.
(12 marks)
5. Develop **FIVE (5)** criteria to analyze and process sensitive personal data in an organization based on *Personal Data Protection Act*.
(10 marks)

(Total: 58 marks)

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SECTION B

HOW ARTIFICIAL INTELLIGENCE WILL REDEFINE MANAGEMENT

Many alarms have sounded on the potential for artificial intelligence (AI) technologies to upend the workforce, especially for easy-to-automate jobs. But managers at all levels will have to adapt to the world of smart machines. The fact is, artificial intelligence will soon be able to do the administrative tasks that consume much of managers' time faster, better, and at a lower cost.

Practice 1: Leave Administration to AI

Managers across all levels spend more than half of their time on administrative coordination and control tasks. For instance, a typical store manager or a lead nurse at a nursing home must constantly juggle shift schedules because of staff members' illnesses, vacations, or sudden departures. These are the very responsibilities that the same managers expect to see AI affecting the most. AI will automate many of these tasks. Report writing is another relevant example. The Associated Press expanded its quarterly earnings reporting from approximately 300 stories to 4,400 with the help of AI-powered software robots. In doing so, technology freed up journalists to conduct more investigative and interpretive reporting. Imagine technology like this drafting your next management report; in fact, this is already possible for some analytical management reports. Recently, the data analytics company Tableau announced a partnership with Narrative Science, a Chicago-based provider of natural language generation tools. The result of the collaboration is Narratives for Tableau, a free Chrome extension that automatically creates written explanations for Tableau graphics.

Practice 2: Focus on Judgment Work

Many decisions require insight beyond what artificial intelligence can squeeze from data alone. Managers use their knowledge of organizational history and culture, as well as empathy and ethical reflection. This is the essence of human judgment — the application of experience and expertise to critical business decisions and practices. Managers we surveyed have a sense of a shift in this direction and identify the judgment-oriented skills of creative thinking and experimentation, data analysis and interpretation, and strategy development as three of the four top new skills that will be required to succeed in the future.

“More often than not, managers think of what they’re doing as requiring judgment, discretion, experience, and the capacity to improvise, as opposed to simply applying rules. And if one of the potential promises of machine learning is the ability to help make decisions, then we should think of technology as being intended to support rather than replace [managers].”

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Practice 3: Treat Intelligent Machines as “Colleagues”

Managers who view AI as a kind of colleague will recognize that there's no need to “race against a machine.” While human judgment is unlikely to be automated, intelligent machines can add enormously to this type of work, assisting in decision support and data-driven simulations as well as search and discovery activities. In fact, 78% of the surveyed managers believe that they will trust the advice of intelligent systems in making business decisions in the future.

One company that is trying to address these opportunities is Kensho Technologies, a provider of next-generation investment analytics. Its system allows investment managers to ask investment-related questions in plain English, such as, “What sectors and industries perform best three months before and after a rate hike?” and get answers within minutes. Picture how such technologies could support individuals and teams of managers in assessing decision consequences and exploring scenarios.

Not only will AI augment managers' work, but it will also enable managers to interact with intelligent machines in collegial ways, through conversation or other intuitive interfaces. AI will be their always-available assistant and adviser.

Adapted from: Vegard Kolbjørnsrud, Richard Amico, and Robert Thomas. (2016). *How Artificial Intelligence Will Redefine Management*. Retrieved from: <https://hbr.org/2016/11/how-artificial-intelligence-will-redefine-management>

Based on the above case, answer the following questions:

6. Explain **THREE (3)** main concerns of artificial intelligence implementation in an organization. (9 marks)
 7. Develop solution to each of the **THREE (3)** problems identified in question 6. (9 marks)
 8. Construct an appropriate transnational strategy to implement artificial intelligence in a multinational company. (10 marks)
 9. Explain key differences between the internal labour market and external labour market in strategic leadership of artificial intelligence implementation. (14 marks)
- (Total: 42 marks)

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